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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,092	01/17/2002	Hiromichi Atsuumi	218135US2	5733
22850	7590	12/16/2003	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			ALLEN, DENISE S	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/047,092

Applicant(s)

ATSUUMI, HIROMICHI

Examiner

Denise S Allen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 19-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Information Disclosure Statement***

The Information Disclosure Statement filed on March 17, 2003 (paper #11) was filed before the mailing of the first Office Action on June 19, 2003 and therefore has been considered by the examiner.

The Information Disclosure Statement filed on June 25, 2003 (paper #12) was filed after the mailing of the first Office Action on June 19, 2003, but complies with 37 CFR 1.97(c) because it includes a statement as specified in 37 CFR 1.97(e) and therefore has been considered by the examiner.

***Response to Amendment***

In light of the Applicant's amendment to claims 2, 6, and 9 on September 17, 2003 (paper #13), the objection to claims 2, 6, and 9 in the Office Action on June 19, 2003 (paper #10) has been withdrawn.

In light of the Applicant's cancellation of claims 16 and 17 on September 17, 2003 (paper #13), the provisional duplicate claim objection to claims 16 and 17 in the Office Action on June 19, 2003 (paper #10) has been withdrawn.

***Response to Arguments***

In the Applicant's response on September 17, 2003 (paper #13), the Applicant argues with respect to claims 1, 19 – 21, and 23, that Suzuki et al fails to teach or reasonable suggest

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that at least one non-arcuate auxiliary surface is located on a focusing element of the second optics where the light beam output from said first optics is transmitted with a maximum diameter in the subscanning direction as recited in amended claims 1, 19 – 21, and 23 (pages 9 – 10). This argument has been fully considered and not found to be persuasive.

The Examiner respectfully disagrees with the Applicant's argument. Since the light beam output from the first optics is incident only on the first surface of the first focusing element of the second optics, it must be transmitted with a maximum diameter in the subscanning direction. Further, Suzuki et al teaches that the first surface of the first focusing element of the second optics is a non-arcuate auxiliary surface, specifically Surface 1 of lens 3a (Figures 1 – 2B and column 16 line 40 – column 17 line 2).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 9 and 19 – 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al (US 6,509,995).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37

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CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 3, 19, and 20, Suzuki et al teaches scanning optics (Figures 8A and 8B) comprising: first optics (reference 102) for coupling a light beam issuing from a light source (reference 101); second optics (references 110, 111, and 112) for condensing the light beam output from said first optics substantially in a form of a line elongated in a main scanning direction (Figure 2B); a deflector (Figure 8A reference 105) including reflection faces (three faces are shown in Figure 8A), which adjoin a position where the light beam is condensed in the form of a line (Figure 2B), for deflecting said light beam with said reflection faces; and third optics (Figures 8A and 8B reference 160) for condensing the light beam deflected by said deflector toward a surface (reference 107) to be scanned to thereby form a beam spot on said surface for optically scanning said surface; wherein said third optics includes at least one focusing element formed of resin (column 18 lines 22 – 23); said second optics includes at least one focusing element formed of resin and at least one focusing element formed of glass (column 19 lines 31 – 34), at least one surface of said second optics comprises a non-arcuate auxiliary surface non-arcuate in a section in a subscanning direction (claim 5), and among said focusing elements of said second optics, a focusing element formed of resin on which the light beam output from said first optics is transmitted with a maximum diameter in the subscanning direction comprises said at least one non-arcuate auxiliary surface (see Response to Arguments above).

Regarding claims 2, 6, and 9, Suzuki et al teaches said third optics includes at least one non-arcuate auxiliary surface (column 16 line 35 – column 17 line 53).

Regarding claims 4 and 7, Suzuki et al teaches said second optics comprises two lenses formed of resin and a single lens formed of glass (column 19 lines 31 – 34), said two lenses (Figure 8B references 110 and 111) formed of resin adjoin said first optics (reference 102) and have negative power in the subscanning direction (column 19 lines 35 – 44), said single lens (reference 112) formed of glass adjoins said deflector (reference 105) and has positive power in the subscanning direction (column 19 lines 45 – 48), and at least one of said two lenses formed of resin has power in the main scanning direction opposite to power of said focusing element of said third optics formed of resin in the main scanning direction (column 19 lines 35 – 39 and lines 49 – 54).

Regarding claims 5 and 8, Suzuki et al teaches one of said two lenses formed of resin has a concave, spherical input surface (reference 110a) and a concave, cylindrical output surface (reference 110b) and adjoins said first optics, the other of said two lenses comprises a cylindrical lens having negative power in the subscanning direction (column 19 lines 42 – 44), and said single lens formed of glass comprises a toroidal lens having positive power in the main and subscanning directions (column 19 lines 45 – 48) and is positioned closer to said deflector than said cylindrical lens and has a non-arcuate auxiliary input surface (reference 112a).

Regarding claims 21 and 23, Suzuki et al teaches an image forming apparatus (Figure 17) including an optical scanning device (reference 1117) for scanning an image carrier (reference 1111), said optical scanning device comprising scanning optics as described above.

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Regarding claims 22 and 24, Suzuki et al teaches said image carrier comprises a photoconductive element (column 28 lines 28 – 29), and said optical scanning device forms a latent image on said photoconductive element (column 28 lines 51 – 54).

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise S Allen whose telephone number is (703) 305-7407. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (703) 305-0024. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the receptionist whose telephone number is (703) 308-1782.

Denise S Allen  
Examiner  
Art Unit 2872

  
dsa



**Audrey Chang**  
**Primary Examiner**  
Technical Officer 2800